Below Grade Demolition Plan
Former Pechiney Cast Plate, Inc. Facility

3200 Fruitland Avenue, Vernon, California

Prepared for:

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1.0 INTRODUCTION

This plan (Plan) has been prepared to describe the approach to demolition of below-grade structures at the former Pechiney Cast Plate, Inc. (Pechiney) facility located at 3200 Fruitland Avenue in Vernon, California (site or property). The above-grade demolition work, as described in the Demolition Work Plan (Geomatrix, April 2006[1]) was completed in November 2006 by Pechiney. As part of the above-ground demolition work, the above-ground features, including the former manufacturing facilities, were demolished leaving the concrete floor slabs and adjacent asphalt pavement in place. The debris generated during the above-grade demolition work was transported off-site for disposal or recycling. Demolition of concrete floor slabs and below-grade structures will be conducted as described in this Plan and in conjunction with soil removal activities. Removal of soil will only be conducted in areas where metals or polychlorinated biphenyls (PCBs) are detected in shallow soil at concentrations exceeding site-specific risk-based remediation goals (assuming future land use as industrial) as proposed in the Remedial Action Plan (RAP).[2] Below-grade demolition activities not involving contaminated materials will be conducted pursuant to the direction of the City of Vernon (City) in accordance with the City's Ordinance related to the closure of Pechiney's hazardous materials permit and the cleanup and removal of all hazardous materials from the site, as described in a March 28, 2006[3] letter from the City of Vernon Health & Environmental Control (City H&EC), and later, in an order issued on July 26, 2006.[4] These activities also will be conducted pursuant to a directive from the City of Vernon Community Services with respect to below-grade demolition work set forth in a May 11, 2006 letter.[5] The constituents of concern (COC)-impacted concrete removal and soil remediation work will be conducted pursuant to an Imminent and Substantial Endangerment Consent Order (Order) issued by the

[1] Geomatrix, 2006, Demolition Work Plan, Former Pechiney Cast Plate, Inc. Facility, April 24.

[2] AMEC, 2011, Remedial Action Plan, Pechiney Cast Plate Facility, Vernon, California, July 2011.

[3] City of Vernon Health & Environmental Control, 2006, letter to Pechiney Cast Plate, regarding closure of hazardous materials establishment permit for 3200 Fruitland Avenue, March 28.

[4] City of Vernon Health & Environmental Control, 2006, letter to Pechiney Cast Plate, regarding Hazardous Materials Closure for Pechiney Cast Plate Inc., 3200 Fruitland Avenue, July 26.

[5] City of Vernon Community Services, 2006, letter to Geomatrix, regarding 3200 Fruitland, May 11.

Department of Toxic Substances Control (DTSC)[6] and directives from United States Environmental Protection Agency (U.S. EPA) with regard to PCB-related matters.

A draft General Below Grade Demolition Plan[7] describing the proposed approach and concepts for the below-grade demolition work to be conducted at the site was submitted to the City on May 8, 2006. The City provided comments to the draft plan on May 11, 2006, and during subsequent electronic mail exchanges on May 23, 2006[8] and May 26, 2006[9], and telephone conferences held on May 30, 2006[10] and June 12, 2006[11]. The draft plan was revised based on the comments provided by the City and based on additional information and data obtained by Geomatrix Consultants, Inc. (Geomatrix) regarding below-grade structures and conditions at the site. The revised plan (referred to as the conceptual plan) was submitted to the City by electronic mail on June 15, 2006[12], and the City approved the conceptual plan on the same day.

On December 13, 2006, the conceptual plan was further modified as documented in the Below Grade Demolition Plan,[13] and the City provided comments to the plan on September 27, 2007. The City also provided comments to a preliminary grading plan[14] on September 14, 2011. The Below Grade Demolition Plan has been further modified to incorporate the City's September 2007 and 2011 comments and to include the phased removal and demolition of the building floor slabs and below grade structures, as described herein. This Plan, as described herein, supersedes all prior communications and correspondence, including, without limitation, the above-described e-mails and telephone conference calls, and represents the complete, final, and exclusive description of the below-grade demolition work.

Based on the information provided in the Feasibility Study (FS)[15] for the site, the RAP was prepared and submitted to DTSC for approval. However, pursuant to the Code of Federal Regulations (CFR), Title 40, Subchapter R, Toxic Substances Control Act (TSCA), Part 761

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[6] Department of Toxic Substances Control (DTSC) Imminent and Substantial Endangerment Consent Order (Order), June 29, 2010, between DTSC and Pechiney Cast Plate, Inc. (Pechiney)

[7] Geomatrix, 2006, General Below Grade Demolition Plan, Former Pechiney Cast Plate, Inc. Facility, May 8.

[8] City of Vernon Community Services, 2006, electronic mail regarding Pechiney Underground Structure Proposal, May 23.

[9] City of Vernon Community Services, 2006, electronic mail regarding further comments to Pechiney Underground Structure Proposal, May 26.

[10] City of Vernon Community Services and Geomatrix, 2006, conference call regarding Pechiney Conceptual Below Grade Demolition Plan, May 30.

[11] City of Vernon Community Services and Geomatrix, 2006, conference call regarding Demo at Pechiney – Vernon Power Plant, June 12.

[12] Geomatrix, 2006, Conceptual Below Grade Demolition Plan, Former Pechiney Cast Plate, Inc. Facility, June 15.

[13] Geomatrix, 2006, Below Grade Demolition Plan, Former Pechiney Cast Plate, Inc. Facility, December 13.

[14] AMEC, Grading Plan (Drawing G-9), Below Grade Demolition & Soil Excavation, Pechiney Cast Plate Inc., Facility, 3200 Fruitland Avenue, Vernon, California, dated July 15, 2011.

[15] AMEC, 2011, Feasibility Study, Pechiney Cast Plate Facility, Vernon, California, July 2011.

(40 CFR 761), the U.S. EPA has oversight jurisdiction for PCB-related matters. Implementation of the RAP will be subject to the Order, DTSC's approval of the RAP and completion of the public comment period for the RAP, as well as U.S. EPA's approval of the PCB Notification Plan[16] submitted to U.S. EPA on July 13, 2009, and Pechiney's proposed site-specific risk-based remediation goals for PCBs in soil and concrete. DTSC's approval of the RAP is pending, and U.S. EPA approved the PCB risk-based remediation goals on July 1, 2011.

Although the Stoddard solvent-impacts remain the responsibility of Alcoa as directed in a September 2, 1999 closure letter from the City of Vernon H&EC, the Stoddard solvent-impacts and the associated residual petroleum hydrocarbon-impacts have been included in the FS and RAP. The remedy for these impacts as outlined in the RAP includes long-term in situ soil vapor extraction (SVE) and bioventing methods. In addition, remediation of soil impacted with volatile organic compounds (VOCs) in the northern portion of the property will be addressed by long-term in situ SVE methods. Pechiney agreed to address the Stoddard solvent impacts at the site, with the understanding that the long-term in situ remedial measures associated with the Stoddard solvent- and VOC-impacted soils will continue after the closing of the purchase of the property.

This Plan has been updated to reflect changes to the below-grade demolition areas, and proposed soil remediation activities as presented in the FS and RAP.

This Plan includes general procedures and proposed approach to below-grade work related to:

- permits and submittals (including storm water management and health and safety)
- removal of below-grade structures and utilities
- location of abandoned or remaining in-place structures
- backfill and compaction
- final site grading
- schedule

The following sections discuss these general procedures and the proposed approach to the below-grade demolition work.

[16] AMEC Geomatrix, Inc., 2009, Polychlorinated Biphenyls Notification Plan, Pechiney Cast Plate Facility, Vernon, California, July 13.

2.0 PERMITS AND SUBMITTALS

Work set forth in this Plan will be conducted in compliance with local, state, and federal laws. Work set forth in this Plan will also be conducted in conformance with appropriate industry standard guidance documents, including but not limited to, the Greenbook, as applicable, and in accordance with prudent professional engineering judgment. The following list of permits and submittals may be required from governing agencies to conduct the below-grade demolition activities described in this Plan. This list is based on our experience in performing similar work in the County of Los Angeles and the City of Vernon. However, other permits that are specific to this project may also be required.

Permit/Submittal	Agency
Demolition and Excavation Permits	City of Vernon
Permit to Disconnect/Terminate Utilities (Fire Service, Electrical, Sewer, Storm Drain etc.)	City of Vernon and other Utility Agencies
Demolition Permit and 10-day Notification	SCAQMD and City of Vernon
Rule 403 and 404 Permit and Notifications	SCAQMD and City of Vernon
Demolition and Excavation Permit	California – Occupational Safety and Health Administration (Cal-OSHA)
Notice of Intent (NOI) – A NOI was issued for the site and is to be maintained by the contractor.	State of California and City of Vernon
Storm Water Pollution Prevention Plan (SWPPP)	State of California and City of Vernon
Permit to use Fire Hydrant Water	City of Vernon
Permit to crush concrete	SCAQMD and City of Vernon
Final Grading Plan and Standard Urban Storm Water Mitigation Plan	State of California and City of Vernon
Traffic Control (Detour) Plan (if needed)	City of Vernon
Encroachment Permit (if needed)	City of Vernon
Permit to Work Near Railroad	Railroad Owner
Transportation Plan (if needed)	California Highway Patrol (CHP)
Certificate of Closure	City of Vernon

2.1 STORM WATER MANAGEMENT

A Storm Water Pollution Prevention Plan (SWPPP) has been prepared for the site and a copy of the SWPPP has been submitted to the City. In addition, appropriate notifications will be provided, and required permits will be obtained, prior to beginning the below-grade demolition.

The storm water management systems at the site consist of collection piping and catch basins. The primary storm water collection/catch basin and discharge systems for the site are located in the eastern parking lot. The storm water collection system discharges to Storm Water

Outfall #8 located along Alcoa Avenue. A second system was located within the former court yard between Buildings 104 and 112A; this system discharged to Outfall #6 located near the cooling tower along Boyle Avenue. Storm Water Outfall #7 (also located along Boyle Avenue) was used to drain rainwater from former building roof structures. Although Outfalls #6 and #7 are no longer in use, their former locations are shown on Figure 1.

The primary storm water system located within the eastern parking lot will be left in place during demolition and site regrading. Storm water Best Management Practices (BMPs) will be maintained throughout the below-grade demolition work in accordance with the SWPPP. Maintenance and monitoring of storm water BMPs will be terminated following receipt of a Closure Certification from the City for the below grade demolition and soil removal work. At which time, storm water management will become the responsibility of the future property owner.

3.0 HEALTH AND SAFETY

All work described in this Plan will be performed in compliance with applicable sections of California Code of Regulations (CCR) Industrial Safety Orders (Title 8), as well as federal and state OSHA regulations. A site-specific health and safety plan (HASP) will be implemented during the below-grade demolition and remediation work. A full-time, project-dedicated Site Safety Supervisor (SSS) working under the direct oversight of a Certified Industrial Hygienist (CIH) will be present on-site to conduct and or supervise worker and perimeter air and dust monitoring during below-grade demolition work. In addition, the SSS will monitor site work to verify compliance with applicable health, safety, and environmental regulations and permit requirements.

4.0 REMOVAL OF BELOW-GRADE STRUCTURES

The depth of removal of man-made structures, as related to current and former operations and existing topography, is described below. Ground surface, or grade, is defined herein as the grade of the site that corresponds to the surface beneath the concrete slab at the north end of the Phase I area, as an approximate elevation of 186 feet above mean sea level (msl) (NAVD 88).

In general, the property slopes from north to south, with the southern boundary being topographically lower than the northern boundary. The ground surface pavement slopes to the south and the building floor slabs exhibit a gradual rise above surrounding parking lot pavement in the southern portions of the site. The elevation of the parking lot pavement ranges from approximately 186 to 182 feet msl as shown on Figure 1. Beyond the railroad tracks (Parcel 6), the pavement elevation is consistent with the elevation of the adjacent railroad easement located between Parcels 6 and 7. The existing site topography is shown on

Figure 1. A final site grading plan is currently being revised based on comments provided by the City on September 14, 2011 and it will be submitted to the City for review and approval in the near term.

4.1 REMOVAL OF MAN-MADE STRUCTURES (FORMER PECHINEY OPERATIONS)

Below-grade demolition will include removal of man-made structures, building slabs, pavements, footings, foundations, pits, and sumps within the footprint of the former buildings and other specific structures located adjacent to the building areas to a depth of approximately 10 feet below grade (bg), or an approximate elevation of 176 feet msl (native grade of 186 feet msl minus 10 feet), regardless of whether it is located in disturbed or native soil. Below-grade demolition of these features will be performed in phases. A phasing plan was developed to allow the contractor to conduct the below-grade demolition work in a controlled manner, with the intent of reducing fugitive dust and odor emissions, and to allow remediation of deeper areas of the site to proceed simultaneously/sequentially with other phases of the work. The area related to each phase of work is briefly described below, along with the proposed plan to address deeper impacted soils after the completion of the below-grade demolition work. The "Phase" terminology is not meant to represent a sequential order of implementation of the below-grade demolition work, but describes the primary locations where the work will be conducted. Each Phase area is shown on Figure 2 (Below Grade Demolition Phasing Plan).

- Phase I and II areas cover the majority of the former building footprints, and these areas will be addressed first during below-grade demolition. In addition to isolated shallow soil removal actions that will occur in these areas during below-grade demolition, remediation of soils impacted with VOCs in the Phase I area will be addressed using SVE methods and is covered in the RAP. This remedial action will need to be coordinated with any potential future site redevelopment.

- The Phase III area includes the hot well/cooling tower and adjacent pavements that are located outside the buildings and the former underground storage tanks (UST) area with known Stoddard solvent impacted soil. Two groundwater monitoring wells located in this area of the site will remain in place and protected during demolition. This area was separated further to distinguish the hot well/cooling tower area (the Phase IIIa area) from the Stoddard solvent-impacted former UST area (the Phase IIIb area).

- The Phase IV area has known Stoddard solvent soil impacts. The removal of the slab in this area prior to implementation of certain in situ remedial measures would present potential concerns with respect to fugitive odors and site health and safety. The schedule for slab removal and below-grade demolition in the Phase IV area remains to be determined. The remedy for impacted soil in this phase area is to include SVE and

bioventing and is covered in the RAP. The slab in this area will be removed once the required remedial measures are undertaken.

- The Phase V area includes Parcel 6 located south of Building 112A.

- The Phase VI area includes the eastern parking lot and paved areas. The pavements located in the Phased VI area will be left in place to support truck traffic during and after the below-grade demolition work. One groundwater monitoring well, which is located in this area, will remain in place and protected during demolition.

A majority of the building foundation footings extend to a depth of 11 to 12 feet below the floor slab. All building foundation footings, excluding the previously buried structures in the Phase VI area, will be removed during demolition, unless the foundation footings are attached to deeper concrete structures that prevent their complete removal. If this is the case, locations of remaining portions of structures abandoned in place will be documented as described in Section 5.0. Soil located adjacent to these structures will not be removed, unless soil at the said location is proposed for removal based on the presence of COCs (specifically arsenic and PCBs) detected at concentrations exceeding site-specific risk-based remediation goals as outlined in the RAP.

Man-made structures other than slabs, pavements, and building foundation footings (pits, sumps, etc.) within the building footprint associated with Pechiney's former operations will only be removed down to a depth of 10 feet bg. Deeper portions of structures such as pits that extend beyond 10 feet bg will be abandoned in place by filling with pea gravel, mechanically vibrated as it is placed. The bottoms of the deeper structures will be pierced to facilitate drainage of any water that may collect in the pit prior to backfilling, unless it is unsafe to enter the excavation. If unsafe conditions are present, the City will be advised of such conditions and the deeper structures will be backfilled with pea gravel and capped with concrete. As an alternative to pea gravel, and if approved by the City, crushed concrete containing PCBs below U.S. EPA approved risk-based remedial goal for concrete will be used. This material would be classified as Restricted Use Fill (crushed concrete containing PCBs at concentrations greater than 1 milligram/kilogram [mg/kg] and less than 3.5 mg/kg). Utility piping and other conduits will be either removed or grouted in place using cement slurry (as described in Section 4.5), based on determinations made in the field during demolition.

Concrete building slabs, pavements, foundation footings or other below-grade features known or determined to contain PCBs greater than the U.S. EPA approved risk-based remediation goal of 3.5 mg/kg (for concrete) will be handled in accordance with applicable TSCA regulations. These materials will be considered TSCA hazardous waste and TSCA bulk

remediation waste as defined in 40 CFR 761. As stated in Section 1.0, U.S. EPA will have oversight jurisdiction in PCB-related matters.

Other specific man-made structures located outside the current building footprint that are proposed for removal will include pavements and a truck scale located in the southern portion of the property (Parcel 6; Phase V area).

The deeper structures that have been identified for removal only down to 10 feet bg include a vertical pit measuring 20 feet in width (W) by 25 feet in length (L) by 35 feet deep (D), and an associated utility pit measuring 10 feet W by10 feet L by 35 feet D located in Building 104 (#1 FDC). Both concrete pits extend to approximately 30 to 35 feet below the building floor slab grade, and the vertical pit contains a hydraulic ram that extends to a depth of 70 feet below the floor slab. The hydraulic ram will be left in place.

The locations of the known deeper structures are shown on Figure 1. Horizontal and vertical locations of the top of the exposed structure will be surveyed and recorded on the Project Record Drawings as described in Section 5.0. Reportedly, other structures have previously been decommissioned in place as discussed below in Section 4.2.

4.2 REMOVAL OF MAN-MADE STRUCTURES (HISTORICAL OPERATIONS)

Portions of man-made structures, located within the upper 10 feet of the subsurface, beneath the building footprint, that were formerly abandoned in place during Alcoa's facility closure activities, will be removed to a depth of 10 feet bg (or an elevation of approximately 176 feet msl). Reportedly, other deeper structures were decommissioned in place, with approval granted by the City, by backfilling with pea gravel (or similar material) and capping with concrete. The upper 10 to 12 feet of these deeper structures will be removed during the proposed below-grade demolition to a depth of 10 feet bg and capped with concrete. The remainder of the deeper structure will be left undisturbed. Because these deeper structures have been previously backfilled, the base of these structures cannot be readily pierced or perforated to facilitate drainage and will be left in their current condition. Horizontal and vertical locations of the top of these exposed structures will be surveyed and recorded on the Project Record Drawings as described in Section 5.0.

The former deeper structures that were reported to be demolished/decommissioned using a similar method as described above include the following.

- Two deep pits in Building 110, which are known as former Swindell Furnace Pits. These pits were formerly backfilled in place and capped with concrete. Each pit measures 18 feet in diameter and extends to a depth of approximately 60 to 63 feet below the floor slab.

- One deep pit in Building 112A also known as a former Swindell Furnace Pit. This pit also was backfilled in place and capped with concrete. This pit is reported to be 19 feet in diameter and extends to approximately 40 to 43 feet below the floor slab.

- One vertical pit referred to as the #4 FDC unit (15 feet W by 18 feet L by 37 feet D, with steel sheet piling walls extending down to 47 feet and a hydraulic ram extending from 37 to 61 feet below the floor slab) and an associated utility pit (10 feet W by 10 feet L by 37 feet D) located in Building 104. Based on information provided by a former Alcoa employee, these pits were decommissioned in 1986 to1987 and the hydraulic ram was reportedly left in place. The exact locations of these pits are not known but are reported to be located as shown on Figure 1.

- Two shallow pits in Building 104 (referred to as #1 DC and #2 DC units). These pits were located in the northwest corner of Building 104 and were backfilled and capped with concrete. Based on information provided by a former Alcoa employee, these pits extend to a depth of about 12 feet below the floor slab and the hydraulic rams associated with the pits may extend to about 20 to 24 feet below slab grade. The #1 DC unit was decommissioned prior to 1974, and the #2 DC unit was decommissioned in about 1974 to 1975. Documentation regarding these pits is limited. The exact locations of these pits are not known but are reported to be located as shown on Figure 1.

The locations of the known deeper structures are shown on Figure 1.

4.3 OTHER MAN-MADE STRUCTURE NOT PROPOSED FOR DEMOLITION AND REMOVAL

The small parking lot, accessed from Fruitland Avenue, was the former location of Buildings 12 and 114, which were demolished by Alcoa in the mid-1990s. Based on observations made during the Phase II investigation and documents related to the demolition of the buildings, four large concrete structures were reportedly decommissioned in place after encapsulation of three of the structures with concrete (Figure 1). The depths to the top of these concrete structures were reported at 8 feet below the parking lot surface (Ursic, 1999[17]) and these structures extend to depths ranging from 13 to 18 feet. Because these structures are located outside the footprint of the existing building and in-place decommissioning of these structures was approved by the City, these structures will not be explored, exposed, perforated, or removed as part of below-grade demolition. Their locations will be recorded on a map based on information obtained from previous demolition activities performed by others. Intrusive work will not be conducted to verify, locate or survey these structures.

In addition to the Phase IV area, pavement roadways along the east property boundary of the site in the Phase VI area (Figure 2) will remain in place to support site access and traffic for the below-grade demolition work and future access for site redevelopment.

[17] Ursic, 1999, Aluminum Company of America, Forge Demolition/Remediation, Final Closure of Forge Facility, Zones 1-4, January 29

4.4 OTHER KNOWN OR UNKNOWN STRUCTURES

Any other known or unknown structures encountered during excavation activities will be removed to a depth of 10 feet bg and structures extending beyond 10 feet will be decommissioned in place as described in Section 4.1. Subsurface explorations (or excavations) to a depth of 10 feet bg in areas not containing above ground structures will not be conducted as part of demolition.

4.5 REMOVAL OF UTILITIES

Utilities located within the upper 3 feet of soil will be removed. Other utilities, such as sewer lines, pipelines, electrical conduits, utility piping, and others, that are present at depths exceeding 3 feet bg will either be removed in their entirety or abandoned in place by filling them with cement slurry. Storm water piping associated with Outfall #8 will be maintained in its existing condition to the extent practicable and required to comply with the SWPPP.

Exploration trenching will not be conducted to locate utilities that remain in place or utilities that were filled with slurry. Those utilities not being used in performance of below-grade demolition work will be cut and capped at the property boundary. Other utilities such as select storm drains (excluding the on-site connection to Outfall #8) and sewer connections employed during below-grade demolition work will be cut and capped at the property boundary. The points where known utilities enter the property or where utilities are encountered during below-grade demolition work will be documented on a map and made part of the project record documents.

5.0 LOCATION OF DECOMMISSIONED OR REMAINING IN PLACE STRUCTURES

The locations of all known remaining structures decommissioned in place below a depth of 10 feet bg will be surveyed by a licensed surveyor and documented on a map (covenant record). No additional excavation will be performed to locate and map deeper former structures that were previously decommissioned or abandoned by others. Structure locations will be determined based on existing and historical project records. The map will be made part of the final project record closure documents to be submitted to the City for certification.

6.0 BACKFILL AND COMPACTION

After completion of the below-grade demolition and soil removal work, excavated areas, trenches, and depressions will be backfilled using crushed, recycled fill material obtained from on-site concrete features removed during demolition. Any imported soil will be certified clean prior to use. Backfill comprised of crushed, recycled concrete containing PCBs at concentrations less than or equal to 1 mg/kg, that also does not contain other COCs at concentrations exceeding risk-based remediation goals, will be considered Unrestricted Use fill material. These materials will be suitable for use as fill at any depth and location on site,

except deeper structures to be backfilled with pea gravel or as an alternative to use crushed concrete containing PCBs below U.S. EPA approved risk-based remedial goal for concrete (proposed in Section 4.1 for Restricted Use fill).

Crushed, recycled concrete containing PCBs at concentrations greater than 1 mg/kg but less than the site-specific remediation goal of 3.5 mg/kg will be considered Restricted Use fill material. The Restricted Use fill material will be placed as backfill in deeper soil excavation areas (area 4a and 4b outlined in the RAP), over COC-impacted soil that will be capped with concrete and remain in place. Areas receiving Restricted Use fill material will then be covered with a high visibility geotextile identification layer and an interim cap, as required by U.S. EPA. The interim cap will consist of a minimum 5 foot thick layer of compacted crushed concrete containing PCBs at a concentration less or equal to than 1 mg/kg (Unrestricted Use fill). The interim cap would be compacted to reduce surface infiltration and constructed with sloped upper surfaces to promote drainage to BMP controlled storm water collection areas as opposed to allowing ponding and infiltration to occur. The geotextile identification layer and interim cap will be placed only over those localized COC-impacted areas that have been backfilled with Restricted Use fill. Other areas where the geotextile identification layer and interim cap could be installed may include areas where soil remains at the native soil surface with PCBs at concentrations greater than 1 mg/kg but less than the proposed site-specific soil remediation goal. The proposed location of the geotextile identification layer, interim cap and construction details were shown on preliminary grading plan.

Recycled materials will be evaluated by the Owner's contracted licensed geotechnical engineer for suitability for use as backfill and will conform to the requirements below:

- Liquid Limit of less than 35;
- Plasticity Index and Expansion Index of less than 30; and
- Free of any detrimental quantity of deleterious material.

The gradation of the backfill material will be consistent with standards noted in the Greenbook for crushed miscellaneous base (200-2.4 or other approved equivalent). A gradation specification for pea gravel will be consistent with a 3/8 to 1/4 inch gravel. If the backfill materials meet the limits described above, the material will be placed and compacted in conformance with the project specifications or to the recommendations by Pechiney's contracted licensed geotechnical engineer. This information will be provided to the City for review prior to beginning backfill. Pechiney will coordinate backfill and compaction work with the City, so that the City, at its cost, can have a contractor on site to monitor the work.

Backfill operations will be observed and tested by a soil technician working under the supervision of the licensed geotechnical engineer to assess whether the fill material is placed in conformance with the project's recommendations and technical specifications. The backfill

materials will be placed in continuous 12-inch thick lifts and machine-compacted to a minimum of 90% relative dry density based on laboratory testing for that material type. Compaction testing will be performed at a frequency of one compaction test for every 200 cubic yards of material backfilled or per lift placed, which ever is more stringent. If portions of the excavation cannot be safely entered by compaction equipment and personnel, the excavation may be backfilled using pea gravel from the bottom of the excavation to a depth at which the excavation can be safely entered (typically four feet bg). Whenever pea gravel is used as fill, it will be mechanically vibrated as it is placed.

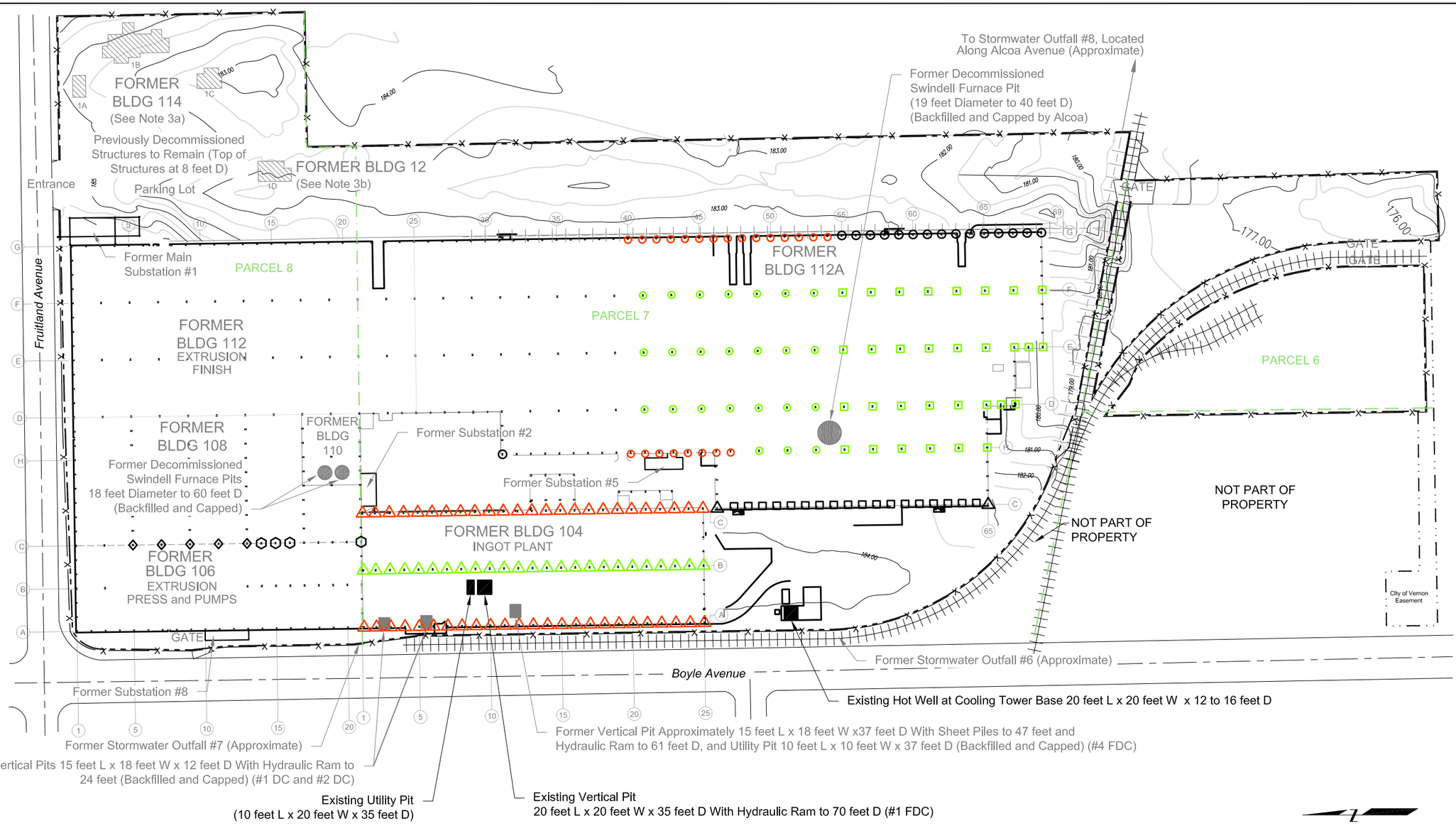
7.0 FINAL GRADE

After removal of all above grade structures and completion of below-grade demolition (as described in this Plan) and soil remediation work, the site will be rough graded for the purposes of contouring the site for drainage and eliminating open trenches or excavations that pose a safety hazard. During final grading, one compaction test will be conducted for every 15,000 square feet and machine-compacted to a minimum of 90% relative dry density based on laboratory testing for that material type. Because soil remediation work will be performed after completing the demolition, the final grades will likely be topographically different than the approximate elevations of the existing ground surface due to site regrading for storm water management and the net export of impacted soil, asphalt and concrete from the site. Recycled crushed concrete (Unrestricted and Restricted Use fill) materials will be used as backfill, in conjunction with existing soil to grade the site. The placed backfill will not be warrantied to be serviceable for any other purpose or that it will not settle in the future because a soils study has not be conducted by a qualified, licensed geotechnical engineer and such a study has not been conducted in conjunction with any contemplated future land use or site conditions. The final site grade will be designed with the objective of conveying any accumulated water to the existing catch basin system connected to Storm Water Outfall #8, which will remain active and in place. Areas where water can pond extensively or where uncontrolled runoff might occur will be minimized. Storm water will be directed to appropriate drainage facilities in accordance with BMPs as described in Section 2.1. The final grade level of Parcel 6 will approximately match the current level or increase slightly based on storm water management objectives and placement of surficial recycled crushed concrete materials to prevent fugitive dust emissions during windy conditions. The proposed final topography of the site following below-grade demolition and soil removal work was shown on the preliminary grading plan. After completion of the below-grade demolition work, AMEC will confirm that the work has been completed in accordance with this Plan.

8.0 SCHEDULE

Commencement of the below grade demolition and soil remediation work is contingent upon DTSC's completion of the public comment period for the RAP and DTSC's final approval of the

RAP. Once DTSC provides its final approval of the RAP, the schedule will be updated and provided to the City. Assuming DTSC were to issue its final approval of the RAP in December 2011, a contractor Notice to Proceed (NTP) with below-grade demolition and shallow soil remediation work is anticipated to occur in the early part of the first quarter of 2012. After preparation of contractor submittals and permit applications, contractor mobilization to the site is anticipated to occur in the second quarter of 2012. Anticipated completion of the below-grade demolition and soil excavation work is anticipated to occur during the third quarter of 2012. However, long-term deeper remediation using SVE for VOCs in soil in the northwest portion of the site in the Phase I area, and deeper remediation using SVE and bioventing in the Phase IIIB and IV areas, is anticipated to continue after completion of below-grade demolition and soil excavation work and will be coordinated with potential future site redevelopment. A closure report will be submitted to the City within 30 days of contractor demobilization of the below-grade demolition and soil excavation work in order for the City to issue a conditional closure to support the closing of the purchase of the property, with the understanding that the long-term in situ remedial measures associated with the VOC- and Stoddard solvent-impacted soils will continue after closing.



Explanation

- 7'x9' footing, total depth below floor slab is 11.0'
- 7'x9' footing, total depth below floor slab is 12.0'
- 9'x9' footing, total depth below floor slab is 11.0'
- 9'x9' footing, total depth below floor slab is 12.0'
- 6.5'x11' footing, total depth below floor slab is 12.1'
- 8.5'x13' footing, total depth below floor slab is 12.1'
- 12'x12' footing, total depth below floor slab is 11.0'
- 12'x12' footing, total depth below floor slab is 12.0'
- 12'x10' footng, total depth below floor slab is 11.0'
- 10.5'x8.5' footing, total depth below floor slab is 11.0'
- Former vertical pit (backfilled)
- Existing vertical pit (not backfilled)
- Former Swindell pit (backfilled)
- Site boundary
- Railroad track (at grade)
- Railroad track (buried)
- Chain link fence

Notes:

1. Footing depths in Explanation are relative to existing floor slab. Dimensions provided in feet (FT) for length (L) x width (W) x depth (D).
2. All locations are approximate. Features are shown on drawing at estimated locations based on review of information provided by others, and has not been independently verified, and are not based on a common datum. This drawing is intended for general information purposes and is not intended for use as a reference to cite location of features. Other features that are not shown on this drawing may be present and be unknown to AMEC Geomatrix. User accepts all responsibility for use of this information and shall independently verify feature locations.

3a. Former Building 114 concrete structures abandoned in place by ALCOA. Elevations to top of structures are approximate. Structures capped with 8 to 10 inches of concrete. Details available in "Aluminum Company of America (ALCOA) Divestiture of the ALCOA Cast Plate Facility, Parcels 6, 7, and 8, Vernon, California, Environmental Activities Volume 2 of 2, A. J. Ursic, Jr., July 26, 1999".

3b Former Building 12 concrete structure abandoned in place by ALCOA. Elevation to top of concrete crane pad structure is approximate. Details available in "Aluminum Company of America Forge Demolition/Remediation, Vernon Facility, Vernon, California, Final Closure of Forge Facility Zones 1-4, A. J. Ursic, Jr., January 29, 1999".

4 Parcel 6 Conceptual Below-Grade Demolition General Approach:
Demolition shall include removal of surface pavements, Truck Scale, railroad spurs, other man-made structures, footings, and foundations associated with the former Loading Dock and Building 136. No existing or former structures deeper than 10 feet below grade (bg) are known to exist on Parcel 6.

5. Parcel 7 Conceptual Below-Grade Demolition General Approach:
Below grade demolition shall include the removal of man-made structures, footings, foundations, pits, and sumps located within the footprint of the existing buildings and other specific structures located adjacent to the building areas to a depth of approximately 10-feet bg. Deeper portions of existing structures that extend beyond 10-feet bg will be demolished to a depth of the 10-feet bg, and the remainder of the structure will be abandoned in place by filling with pea gravel or similar material. Deeper portions of former structures, present within the upper 10-feet of the subsurface that were previously decommissioned, will be demolished to a depth of 10-feet bg, and the remaining deeper portions will be left in place as-is. Utility piping and other conduits will be with removed or grouted in-place using cement slurry.

6. Parcel 8 Conceptually Below-Grade Demolition General Approach:
Below grade demolition shall include the removal of man-made structures, footings, foundations, pits, and sumps located within the footprint of the existing buildings to a depth of approximately 10-feet bg. Deeper portions of existing structures that extend beyond 10-feet bg will be demolished to a depth of 10-feet bg, and the remainder of the structure will be abandoned in place by filling with pea gravel or similar material. Deeper portions of former structures located within the footprint of existing buildings, present within the upper 10-feet of the subsurface that were previously decommissioned, will be demolished to a depth of 10-feet bg, and the remaining deeper portions will be left in place as-is. Former structures located outside of the building footprints that were previously decommissioned will be left in place as-is. Utility piping and other conduits will be either removed or grouted in-place using cement slurry.

0 75 150

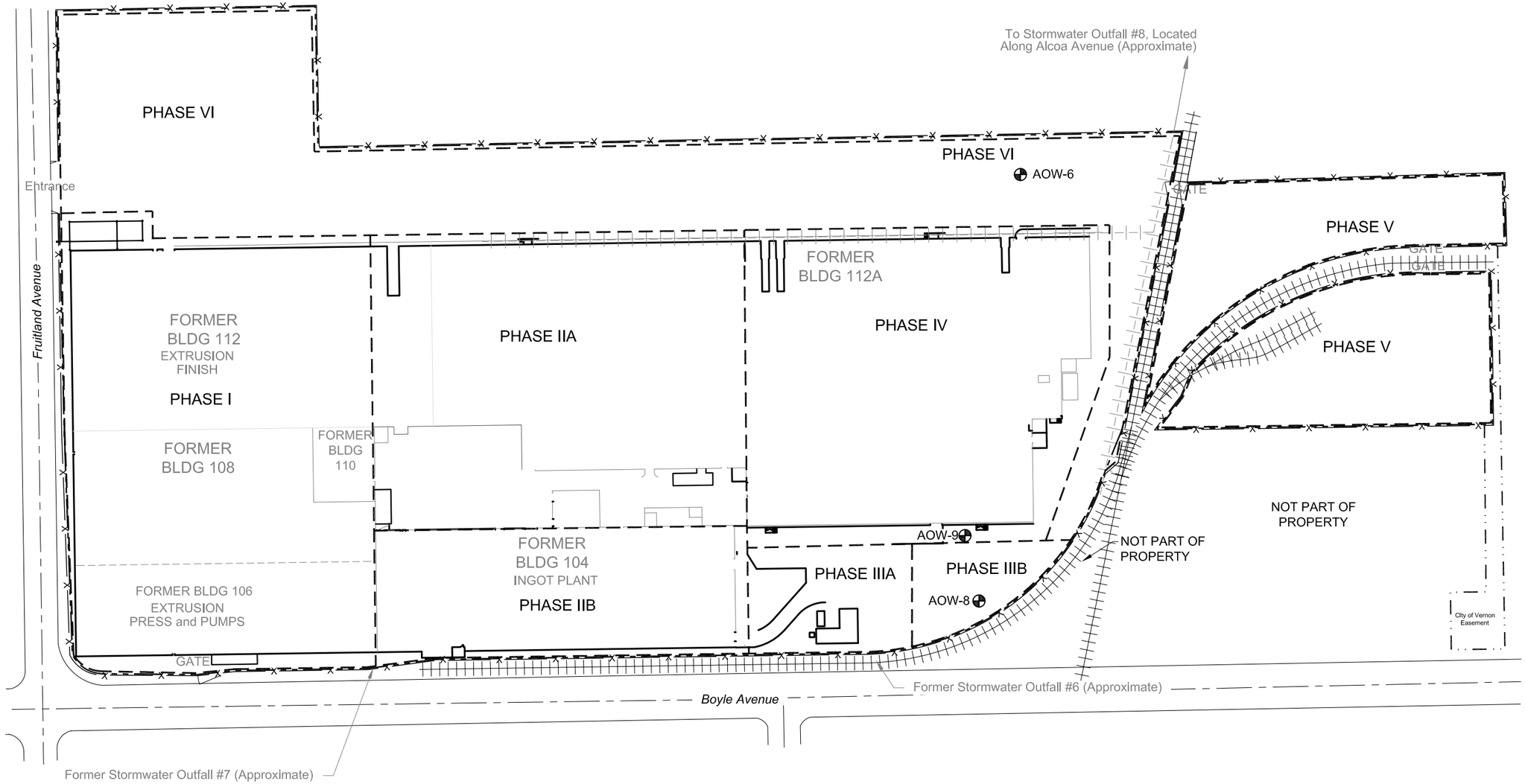
Approximate Scale in Feet

Basemap modified from Pechiney Cast Plate, Inc. Site Plan dated January 9, 2002; Geraghty & Miller, Inc. "Groundwater Elevation and Volatile Organic Compound Concentrations December 8, 1994" figure dated February 2, 1995; Aluminum Company of America "Works General-MPA" figure dated October 10, 1984; and Los Angeles County Assessor's Office Parcel Map 6310/Sheet 8 dated November 5, 1958.

KNOWN SUBSURFACE STRUCTURES, INCLUDING THOSE EXTENDING DEEPER THAN 10 FEET
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

By: pah	Date: 09/30/11	Project No.10627.003
amec		Figure 1

Plot Date: 09/30/11 - 11:10am, Plotted by: pat.herring
Drawing Path: Y:\10627.003.0\acad\Reports_2011\BelowGrade_WP_Vernon_09-2011\, Drawing Name: _tb_Known Subsurface Structures below 10ft.dwg, Figure 1-KnownSubsurfaceStructures-10 Feet



Explanation

- Site boundary
- Phase boundary
- Railroad track (at grade)
- Railroad track (buried)
- Chain link fence
- AOW-9 Groundwater monitoring well

0 75 150

Approximate Scale in Feet

Basemap modified from Pechiney Cast Plate, Inc. Site Plan dated January 9, 2002; Geraghty & Miller, Inc. "Groundwater Elevation and Volatile Organic Compound Concentrations December 8, 1994" figure dated February 2, 1995; Aluminum Company of America "Works General-MPA" figure dated October 10, 1984; and Los Angeles County Assessor's Office Parcel Map 6310/Sheet 8 dated November 5, 1958.

PHASING PLAN
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

By: pah	Date: 09/27/11	Project No. 10627.003
amec		Figure 2

Plot Date: 10/03/11 - 10:57am, Plotted by: pat.herring
Drawing Path: Y:\10627.003.0\acad\Reports_2011\BelowGrade_WP_Vernon_09-2011\, Drawing Name: _tb_Phasing Plan.dwg, Figure 2-Phasing Plan